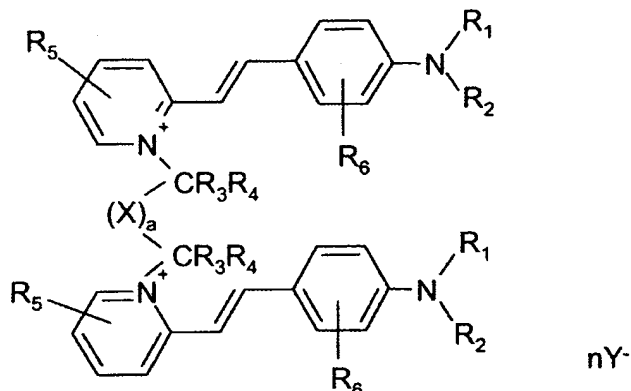


**WHAT IS CLAIMED IS:**

1. A process for dyeing human keratin materials having a lightening effect, comprising applying to the materials, a composition comprising, in a cosmetically acceptable medium, at least one fluorescent dye having the following formula:



wherein:

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from:

- hydrogen atoms;
- linear and branched alkyl radicals comprising 1 to 10 carbon atoms, optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- aryl and arylalkyl radicals, wherein the aryl groups comprise 6 carbon atoms and the alkyl groups comprise 1 to 4 carbon atoms; the aryl groups are optionally substituted with at least one linear or branched alkyl radical comprising 1 to 4 carbon atoms optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom

and optionally substituted with at least entity one chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;

- $R_1$  and  $R_2$  are optionally linked so as to form a heterocycle with the nitrogen atom to which they are attached and optionally further comprise at least one hetero atom, wherein the heterocycle is optionally substituted with at least one entity chosen from linear and branched alkyl radicals optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- $R_1$  or  $R_2$  is also optionally included in a heterocycle comprising the nitrogen atom to which they are attached and one of the carbon atoms of the phenyl group comprising the nitrogen atom;

$R_3$  and  $R_4$ , which may be identical or different, are chosen from hydrogen atoms and alkyl radicals comprising 1 to 4 carbon atoms;

$R_5$ , which may be identical or different, is chosen from hydrogen atoms, halogen atoms and linear and branched alkyl radicals comprising 1 to 4 carbon atoms, optionally interrupted with at least one hetero atom;

$R_6$ , which may be identical or different, is chosen from hydrogen atoms; halogen atoms; and linear and branched alkyl radicals comprising 1 to 4 carbon atoms, optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom and halogen atoms, and interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom;

X is chosen from:

- linear and branched alkyl radicals comprising 1 to 14 carbon atoms and alkenyl radicals comprising 2 to 14 carbon atoms, wherein said alkyl and alkenyl radicals are optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and are optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- 5- and 6-membered heterocyclic radicals optionally substituted with at least one entity chosen from
  - linear and branched alkyl radicals comprising 1 to 14 carbon atoms, optionally substituted with at least one hetero atom;
  - linear and branched aminoalkyl radicals comprising 1 to 4 carbon atoms, optionally substituted with at least one hetero atom; and
  - halogen atoms;
- fused and non-fused aromatic and diaromatic radicals, optionally separated with an alkyl radical comprising 1 to 4 carbon atoms, wherein the aromatic and diaromatic radicals are optionally substituted with at least one entity chosen from halogen atoms, and alkyl radicals comprising 1 to 10 carbon atoms optionally substituted and/or interrupted with at least one hetero atom and/or group comprising at least one hetero atom;
- dicarbonyl radicals;
- the group X optionally comprising at least one cationic charge;

a is equal to 0 or 1;

Y<sup>-</sup>, which may be identical or different, is chosen from organic and mineral anions; and

n is an integer ranging from 2 to the number of cationic charges present in the fluorescent

dye.

2. The process according to claim 1, wherein  $R_1$  and  $R_2$ , which may be identical or different, are chosen from:

- hydrogen atoms;
- alkyl radicals comprising 1 to 6 carbon atoms, optionally interrupted with at least one entity chosen from oxygen atoms, and optionally substituted with at least one entity chosen from hydroxyl, amino and ammonium radicals and chlorine and fluorine atoms;
- benzyl and phenyl radicals optionally substituted with at least one entity chosen from alkyl and alkoxy radicals comprising 1 to 4 carbon atoms; and
- nitrogen atoms, heterocyclic radicals chosen from pyrrolo, pyrrolidino, imidazolino, imidazolo, imidazolium, pyrazolino, piperazino, morpholino, morpholo, pyrazolo and triazolo radicals, optionally substituted with at least one entity chosen from linear and branched alkyl radicals comprising 1 to 4 carbon atoms optionally interrupted with at least one entity chosen from nitrogen and oxygen atoms and groups comprising a nitrogen or oxygen atoms and optionally substituted with at least one entity chosen from nitrogen and oxygen atoms and groups comprising a nitrogen or oxygen atoms.

3. The process according to claim 1, wherein  $R_1$  and  $R_2$ , which may be identical or different, are chosen from alkyl radicals comprising 1 to 4 carbon atoms.

4. The process according to claim 1, wherein  $R_1$  and  $R_2$ , which may be identical or different, are chosen from methyl and ethyl radicals.

5. The process according to claim 1, wherein  $R_5$  and  $R_6$  are hydrogen atoms.

6. The process according to claim 1, wherein X is chosen from:

- linear and branched alkyl radicals comprising 1 to 14 carbon atoms, and

alkenyl radicals comprising 2 to 14 carbon atoms, optionally substituted with at least one entity chosen from oxygen and nitrogen atoms and groups comprising at least one hetero atom and optionally interrupted with at least one entity chosen from oxygen, nitrogen, and fluorine atoms, and groups comprising at least one hetero atom;

- dicarbonyl radicals;
- 5- and 6-membered heterocyclic radicals, chosen from imidazolo, pyrazolo, triazino and pyridino radicals, optionally substituted with at least one entity chosen from linear and branched alkyl radicals comprising 1 to 14 carbon atoms; and linear and branched aminoalkyl radicals comprising 1 to 10 carbon atoms, optionally substituted with a group comprising at least one entity chosen from hetero atoms and halogen atoms; and
- aromatic radicals comprising 6 carbon atoms and fused and non-fused diaromatic radicals, optionally separated with at least one alkyl radical comprising 1 to 4 carbon atoms, wherein the aromatic and diaromatic radicals are optionally substituted with at least one entity chosen from halogen atoms and alkyl radicals comprising 1 to 10 carbon atoms optionally interrupted with at least one entity chosen from oxygen and nitrogen atoms, and groups comprising at least one hetero atom.

7. The process according to claim 1, wherein the at least one fluorescent dye is present in an amount ranging from 0.01% to 20% by weight, relative to the total weight of the composition.

8. The process according to claim 7, wherein the at least one fluorescent dye is present in an amount ranging from 0.05% to 10% by weight, relative to the total weight of

the composition.

9. The process according to claim 8, wherein the at least one fluorescent dye is present in an amount ranging from 0.1% to 5% by weight, relative to the total weight of the composition.

10. The process according to claim 1, wherein the composition further comprises at least one additional fluorescent dye.

11. The process according to claim 10, wherein the at least one additional fluorescent dye is present in an amount ranging from 0.05% to 10% by weight relative to the total weight of the composition.

12. The process according to claim 11, wherein the at least one additional fluorescent dye is present in an amount ranging from 0.05% to 10% by weight, relative to the total weight of the composition.

13. The process according to claim 1, wherein the composition further comprises at least one non-fluorescent direct dye.

14. The process according to claim 13, wherein the at least one non-fluorescent direct dye is chosen from nitrobenzene dyes, azo dyes, azomethine dyes, methine dyes, anthraquinone dyes, naphthoquinone dyes, benzoquinone dyes, phenothiazine dyes, indigoid dyes, xanthene dyes, phenanthridine dyes, phthalocyanin dyes, and triarylmethane-based dyes.

15. The process according to claim 14, wherein the at least one direct dye is present in an amount ranging from 0.0005% to 12% by weight, relative to the total weight of the composition.

16. The process according to claim 15, wherein the at least one direct dye is present in an amount ranging from 0.005% to 6% by weight, relative to the total weight of

the composition.

17. The process according to claim 1, wherein the composition further comprises at least one surfactant chosen from nonionic, anionic, cationic, amphoteric and zwitterionic surfactants.

18. The process according to claim 17, wherein the at least one surfactant is present in an amount ranging from 0.01% to 40% by weight, relative to the total weight of the composition.

19. The process according to claim 18, wherein the at least one surfactant is present in an amount ranging from 0.1% to 30% by weight, relative to the total weight of the composition.

20. The process according to claim 1, wherein the cosmetically acceptable medium comprises water and optionally an organic solvent.

21. The process according to claim 1, wherein the composition is in the form of a dyeing shampoo.

22. The process according to claim 1, wherein the composition is in the form of a mascara for the eyelashes or a hair mascara.

23. The process according to claim 1, wherein the composition further comprises at least one oxidation base chosen from para-phenylenediamines, bis(phenyl)alkylenediamines, para-aminophenols, ortho-aminophenols, heterocyclic bases, and the acid and alkaline agent addition salts thereof.

24. The process according to claim 23, wherein the at least one oxidation base is present in an amount ranging from 0.0005% to 12% by weight, relative to the total weight of the composition.

25. The process according to claim 24, wherein the at least one oxidation base is

present in an amount ranging from 0.005% to 6% by weight, relative to the total weight of the composition.

26. The process according to claim 1, wherein the composition further comprises at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, heterocyclic couplers, and the acid and alkaline agent addition salts thereof.

27. The process according to claim 26, wherein the at least one coupler is present in an amount ranging from 0.0001% to 10% by weight, relative to the total weight of the composition.

28. The process according to claim 27, wherein the at least one coupler is present in an amount ranging from 0.005% to 5% by weight, relative to the total weight of the composition.

29. The process according to claim 1, wherein the composition further comprises at least one oxidizing agent.

30. The process according to claim 29, wherein the at least one oxidizing agent is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts, and enzymes.

31. The process according to claim 30, wherein the persalts are chosen from perborates and persulphates.

32. The process according to claim 30, wherein the enzymes are chosen from peroxidases and two-electron and four-electron oxidoreductases.

33. The process according to claim 1, further comprising drying the human keratin materials.

34. The process according to claim 1, further comprising:  
a) applying the composition to the human keratin materials for a time that is sufficient to



develop the desired coloration and lightening,

- b) optionally rinsing the human keratin materials,
- c) optionally washing and rinsing the human keratin materials, and
- d) drying the human keratin materials.

35. The process according to claim 6, wherein the groups comprising at least one hetero atom are chosen from hydroxyl, alkoxy, amino, ammonium, amido, carbonyl, and carboxyl (-COOH- and -O-CO-) groups.

36. The process according to claim 6, wherein the linear and branched alkyl radicals comprises 1 to 10 carbon atoms.

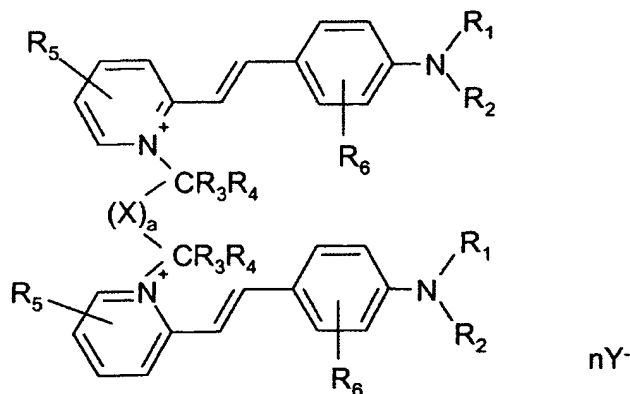
37. The process according to claim 6, wherein the linear and branched alkyl radicals comprise 1 to 4 carbon atoms.

38. The process according to claim 6, wherein the linear and branched aminoalkyl radicals comprise 1 to 4 carbon atoms.

39. The process according to claim 6, wherein the groups comprising at least one entity chosen from hetero atoms is a hydroxyl radical.

40. The process according to claim 6, wherein the fused and non-fused diaromatic radicals comprise 10 to 12 carbon atoms.

41. A fluorescent dye having the following formula:



wherein:

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from:

- hydrogen atoms;
- linear and branched alkyl radicals comprising 1 to 10 carbon atoms, optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- aryl and arylalkyl radicals, wherein the aryl groups comprise 6 carbon atoms and the alkyl groups comprise 1 to 4 carbon atoms; the aryl groups are optionally substituted with at least one linear or branched alkyl radical comprising 1 to 4 carbon atoms optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- R<sub>1</sub> and R<sub>2</sub> are optionally linked so as to form a heterocycle with the nitrogen atom to which they are attached and optionally comprise at least one hetero atom, wherein the heterocycle is optionally substituted with at least one entity chosen from linear and branched alkyl radicals and optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- R<sub>1</sub> or R<sub>2</sub> is also optionally included in a heterocycle comprising the nitrogen

atom and one of the carbon atoms of the phenyl group comprising the nitrogen atom;

R<sub>3</sub> and R<sub>4</sub>, which may be identical or different, are chosen from hydrogen atoms and alkyl radicals comprising 1 to 4 carbon atoms;

R<sub>5</sub>, which may be identical or different, is chosen from hydrogen atoms, halogen atoms and linear and branched alkyl radicals comprising 1 to 4 carbon atoms, optionally interrupted with at least one hetero atom;

R<sub>6</sub>, which may be identical or different, is chosen from hydrogen atoms; halogen atoms; and linear and branched alkyl radicals comprising 1 to 4 carbon atoms, optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom and halogen atoms and interrupted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;

X is chosen from:

- linear and branched alkyl radicals comprising 1 to 14 carbon atoms and alkenyl radicals comprising 2 to 14 carbon atoms, wherein said alkyl and alkenyl radicals are optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- 5- and 6-membered heterocyclic radicals optionally substituted with at least one entity chosen from

linear and branched alkyl radicals comprising 1 to 14 carbon atoms, optionally substituted with at least one hetero atom;

linear and branched aminoalkyl radicals comprising 1 to 4 carbon atoms,

optionally substituted with at least one hetero atom; and

halogen atoms;

- fused and non-fused aromatic or diaromatic radicals, optionally separated with an alkyl radical comprising 1 to 4 carbon atoms, wherein the aromatic and diaromatic radicals are optionally substituted with at least one entity chosen from halogen atoms and alkyl radicals comprising 1 to 10 carbon atoms optionally substituted and/or interrupted with at least one hetero atom and/or group comprising at least one hetero atom;
- dicarbonyl radicals;
- the group X optionally comprising at least one cationic charge;

a is equal to 0 or 1;

Y<sup>-</sup>, which may be identical or different, is chosen from organic or mineral anions; and

n is an integer ranging from 2 to the number of cationic charges present in the fluorescent dye;

with the exception of the dye for which:

- X is chosen from unsubstituted linear alkyl radicals comprising 1 or 4 carbon atoms wherein a is equal to 1 or a is equal to 0; and R<sub>1</sub> and R<sub>2</sub> simultaneously are methyl radicals; R<sub>5</sub> and R<sub>6</sub> are hydrogen atoms; R<sub>3</sub> and R<sub>4</sub>, which may be identical, are hydrogen atoms;
- X is chosen from ethyl, linear and branched unsubstituted C<sub>3</sub> alkyl radicals, wherein a is equal to 1; R<sub>3</sub> and R<sub>4</sub>, which are identical, are hydrogen atoms; R<sub>5</sub> is a hydrogen atom; wherein R<sub>1</sub> and R<sub>2</sub>:
  - are identical, and are methyl radicals and, R<sub>6</sub> is chosen from a hydrogen atom and a methyl radical in an ortho position relative to the carbon atom

of the benzene ring bearing the carbon-carbon unsaturated bond; and

- are identical, are ethyl radicals,
- and  $R_6$  is chosen from hydrogen atoms and methoxy radicals in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond; or
- are different, and are chosen from ethyl radicals and ethyl radicals substituted with an entity chosen from dimethylamino, trimethylammonium and benzyldimethylammonium groups;

-X is chosen from phenyl radicals linked to the groups  $CR_3R_4$  via bonds in the 1,4 position relative to each other;  $R_3$  and  $R_4$ , which are identical, are hydrogen atoms; wherein a is equal to 1;  $R_5$  is a hydrogen atom; wherein  $R_1$  and  $R_2$ :

- are identical, and are methyl radicals,  $R_6$  is chosen from hydrogen atoms and methyl radicals in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond;
- and are identical, comprise ethyl radicals, and  $R_6$  is chosen from hydrogen atoms and methoxy radicals in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond; or
- are different, and are chosen from ethyl radicals and ethyl radicals substituted with an entity chosen from dimethylamino, trimethylammonium and benzyldimethylammonium groups.

42. The dye of claim 41, wherein  $R_1$  and  $R_2$ , which may be identical or different, are chosen from:

- hydrogen atoms;

- alkyl radicals comprising 1 to 6 carbon atoms, optionally interrupted with an oxygen atom and optionally substituted with at least one entity chosen from hydroxyl, amino and ammonium radicals and chlorine and fluorine atoms;
- benzyl and phenyl radicals optionally substituted with at least one entity chosen from alkyl and alkoxy radicals comprising 1 to 4 carbon atoms;
- nitrogen atoms, heterocyclic radicals chosen from pyrrolo, pyrrolidino, imidazolino, imidazolo, imidazolium, pyrazolino, piperazino, morpholino, morpholo, pyrazolo and triazolo radicals, optionally substituted with at least one entity chosen from linear and branched alkyl radicals comprising 1 to 4 carbon atoms optionally interrupted with at least one entity chosen from nitrogen and oxygen atom, and groups comprising a nitrogen or oxygen atoms, and optionally substituted with at least one entity chosen from nitrogen and oxygen atoms and groups comprising nitrogen and/or oxygen atoms.

43. The dye according to claim 42, wherein the alkyl and alkoxy radicals comprise 1 or 2 carbon atoms.

44. The dye according to claim 41, wherein  $R_1$  and  $R_2$ , which may be identical or different, are chosen from alkyl radicals comprising 1 to 4 carbon atoms.

45. The dye according to claim 44, wherein  $R_1$  and  $R_2$ , which may be identical or different, are chosen from methyl radicals and ethyl radicals.

46. The dye according to claim 41, wherein  $R_5$  and  $R_6$  are hydrogen atoms.

47. The dye according to claim 41, wherein X is chosen from:

- branched alkyl radicals comprising 4 to 14 carbon atoms; linear and branched alkyl radicals comprising 1 to 14 carbon atoms, substituted with at least one entity chosen from halogen atoms, hetero atoms, and groups bearing at least one hetero atom;

linear and branched alkyl radicals comprising 1 to 14 carbon atoms interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom; linear and branched alkene radicals comprising 2 to 14 carbon atoms, optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms and groups bearing at least one hetero atom;

- dicarbonyl radicals;
- 5- and 6-membered heterocyclic radicals optionally substituted with at least one entity chosen from alkyl radicals comprising 1 to 14 carbon atoms, optionally substituted with at least one hetero atom; linear and branched aminoalkyl radicals, comprising 1 to 4 carbon atoms, optionally substituted with at least one hetero atom; and halogen atoms;
- C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and comprising a group comprising at least one hetero atom which is optionally directly linked to the aromatic radical, in position 1,3 relative to each other, wherein the C<sub>6</sub> aromatic radicals are optionally substituted with at least one entity chosen from halogen atom and C<sub>1</sub>-C<sub>4</sub> alkyl radicals; the ; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via , linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals in position 1,2 relative to each other, which may be identical or different, and comprising a group comprising at least one hetero atom which is optionally directly linked to the aromatic radical; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via bonds in position 1,2 relative to each other, substituted with at least one group comprising at least one hetero atom; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical

or different, and containing a group comprising at least one hetero atom which may optionally be directly linked to the aromatic radical in position 1,4 relative to each other; ; and diphenyl radicals linked to the groups  $CR_3R_4$  via bonds in position 4,4' relative to each other, the two aromatic rings optionally being linked by means of a linear or branched  $C_1$ - $C_4$  alkyl radical; and

- the group X optionally bearing at least one cationic charge.

48. The dye according to claim 41, wherein X is chosen from:

- branched alkyl radicals comprising 4 to 13 carbon atoms; linear and branched alkyl radicals comprising 1 to 13 carbon atoms, substituted with at least one entity chosen from chlorine atoms, hydroxyl radicals, acetoxy radicals, amino radicals, and ammonium radicals; linear and branched alkyl radicals comprising 2 to 12 carbon atoms interrupted with at least one entity chosen from oxygen atoms, nitrogen atoms comprising at least one entity, which may be identical or different, chosen, independently of each other, from hydrogen atoms, and linear and branched  $C_1$ - $C_4$  alkyl radicals optionally comprising a hydroxyl group; and linear and branched alkene radicals comprising 2 to 12 carbon atoms, and comprising an unsaturated carbon-carbon bond;
- pyridine radicals linked to the groups  $CR_3R_4$  via bonds in positions 2 and 6 relative to each other;
- imidazole radicals optionally substituted with at least one  $C_1$ - $C_{14}$  alkyl radical;
- $C_6$  aromatic radicals linked to the groups  $CR_3R_4$  via linear and branched  $C_1$ - $C_4$  alkyl radicals, which may be identical or different, and containing a group comprising at least one hetero atom which may optionally be directly linked to the aromatic radical in position 1,3 relative to each other wherein the  $C_6$  aromatic radicals are optionally



substituted with at least one entity chosen from fluorine atoms and methyl; the bonds comprising C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing a group comprising an oxygen atom directly linked to the aromatic radical in position 1, 2 relative to each other; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via bonds in position 1,2 relative to each other, substituted with at least one—C(=O)O-; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and comprising at least one amide group directly linked to the aromatic radical in position 1,4 relative to each other; and diphenyl radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via bonds in position 4,4' relative to each other, the two aromatic rings being optionally linked by a linear or branched alkyl radical containing 1 to 4 carbon atoms;

- the group X optionally comprising at least one cationic charge.

49. The dye according to claim 41, wherein X is chosen from:

- branched alkyl radicals comprising 4 to 13 carbon atoms; linear and branched alkyl radicals comprising 1 to 13 carbon atoms, substituted with at least one entity chosen from chlorine atoms, hydroxyl radicals, acetoxy radicals, amino radicals, and ammonium radicals; linear and branched alkyl radicals comprising 2 to 12 carbon atoms interrupted with at least one entity chosen from oxygen atoms, and nitrogen atoms comprising one or two radicals, which may be identical or different, chosen, independently of each other, from hydrogen atoms, linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals optionally comprising a hydroxyl group; and linear and branched alkene radicals comprising 2 to 12 carbon atoms, and comprising an unsaturated carbon-carbon bond;

- imidazole radicals optionally substituted with at least one C<sub>1</sub>-C<sub>14</sub> alkyl radical;
- C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing a group comprising at least one hetero atom which may optionally be directly linked to the aromatic radical in position 1,3 relative to each other wherein the C<sub>6</sub> aromatic radicals are optionally substituted with at least one entity chosen from fluorine atoms and methyl; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via the linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing an amide group directly linked to the aromatic radical in position 1, 4 relative to each other; and
- the group X optionally comprising at least one cationic charge.

50. The dye according to claim 41, wherein:

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from methyl radicals and ethyl radicals,

R<sub>5</sub> and R<sub>6</sub> comprise hydrogen atoms,

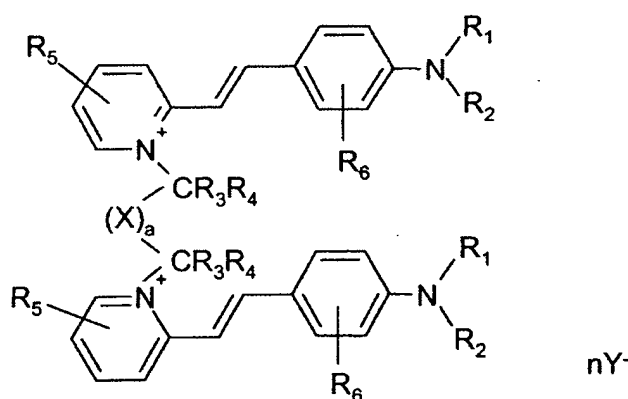
X is chosen from:

- branched alkyl radicals comprising 4 to 13 carbon atoms; linear or branched alkyl radicals comprising 1 to 13 carbon atoms, substituted with at least one entity chosen from chlorine atoms, hydroxyl radicals, acetoxy radicals, amino radicals, and ammonium radicals; linear and branched alkyl radicals comprising 2 to 12 carbon atoms interrupted with at least one entity chosen from oxygen atoms, and nitrogen atoms comprising at least one radical, which may be identical or different, chosen, independently of each other, from hydrogen atoms, and linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals optionally comprising a hydroxyl group; linear and branched alkene radicals comprising 2 to 12 carbon atoms, and comprising an unsaturated carbon-

carbon bond;

- imidazole radicals optionally substituted with at least one C<sub>1</sub>-C<sub>14</sub> alkyl radical;
- C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing a group comprising at least one hetero atom which is optionally directly linked to the aromatic radical in position 1,3 relative to each other wherein the C<sub>6</sub> aromatic radicals are optionally substituted with at least one entity chosen from fluorine atoms and methyl; ; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing an amide group directly linked to the aromatic radical in position 1, 4, relative to each other; and
- the group X optionally comprising at least one cationic charge.

51. A composition comprising, in a cosmetically acceptable medium, at least one fluorescent dye having the following formula:



wherein:

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from:

- hydrogen atoms;
- linear and branched alkyl radicals comprising 1 to 10 carbon atoms, optionally

interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;

- aryl and arylalkyl radicals, wherein the aryl groups comprising 6 carbon atoms and the alkyl groups comprise 1 to 4 carbon atoms; the aryl groups optionally be substituted with at least one linear or branched alkyl radicals comprising 1 to 4 carbon atoms optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least entity chosen from one hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- $R_1$  and  $R_2$  is optionally linked so as to form a heterocycle with the nitrogen atom and optionally further comprises at least one hetero atom, wherein the heterocycle is optionally substituted with at least one entity chosen from linear and branched alkyl radicals optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- $R_1$  or  $R_2$  is also optionally included in a heterocycle comprising the nitrogen atom and one of the carbon atoms of the phenyl group comprising the nitrogen atom;

$R_3$  and  $R_4$ , which may be identical or different, are chosen from hydrogen atoms and alkyl radicals comprising 1 to 4 carbon atoms;

$R_5$ , which may be identical or different, is chosen from hydrogen atoms, halogen atoms and

linear and branched alkyl radicals comprising 1 to 4 carbon atoms, optionally interrupted with at least one hetero atom;

R<sub>6</sub>, which may be identical or different, is chosen from hydrogen atoms; halogen atoms; and linear and branched alkyl radicals comprising 1 to 4 carbon atoms, optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom and halogen atoms, and interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom;

X is chosen from:

- linear and branched alkyl radicals comprising 1 to 14 carbon atoms and alkenyl radicals comprising 2 to 14 carbon atoms, optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- 5- and 6-membered heterocyclic radicals optionally substituted with at least one entity chosen from linear and branched alkyl radicals comprising 1 to 14 carbon atoms, optionally substituted with at least one hetero atom; linear and branched aminoalkyl radicals comprising 1 to 4 carbon atoms, optionally substituted with at least one hetero atom; and halogen atoms;
- fused and non-fused aromatic and diaromatic radicals, optionally separated with an alkyl radical comprising 1 to 4 carbon atoms, wherein the aromatic and diaromatic radicals are optionally substituted with at least one entity chosen from halogen atoms, and alkyl radicals comprising 1 to 10 carbon atoms optionally substituted and/or interrupted with at least one hetero atom

and/or group comprising at least one hetero atom;

- dicarbonyl radicals;
- the group X optionally comprising at least one cationic charge;

a is equal to 0 or 1;

Y<sup>-</sup>, which may be identical or different, is chosen from organic and mineral anions; and

n is an integer ranging from 2 to the number of cationic charges present in the fluorescent dye.

52. The composition according to claim 51, wherein R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from:

- hydrogen atoms;
- alkyl radicals comprising 1 to 6 carbon atoms, optionally interrupted with at least one entity chosen from oxygen atoms, and optionally substituted with at least one entity chosen from hydroxyl, amino and ammonium radicals and chlorine and fluorine atoms;
- benzyl and phenyl radicals optionally substituted with at least one entity chosen from alkyl and alkoxy radicals comprising 1 to 4 carbon atoms; and
- nitrogen atoms, heterocyclic radicals chosen from pyrrolo, pyrrolidino, imidazolino, imidazolo, imidazolium, pyrazolino, piperazino, morpholino, morpholo, pyrazolo and triazolo radicals, optionally substituted with at least one entity chosen from linear and branched alkyl radicals comprising 1 to 4 carbon atoms optionally interrupted with at least one entity chosen from nitrogen and oxygen atoms and groups comprising a nitrogen or oxygen atoms and optionally substituted with at least one entity chosen from nitrogen and oxygen atoms and groups comprising a nitrogen or oxygen atoms.

53. The composition according to claim 51, wherein R<sub>1</sub> and R<sub>2</sub>, which may be

identical or different, are chosen from alkyl radicals comprising 1 to 4 carbon atoms.

54. The composition according to claim 51, wherein  $R_1$  and  $R_2$ , which may be identical or different, are chosen from methyl and ethyl radicals.

55. The composition according to claim 51, wherein  $R_5$  and  $R_6$  are hydrogen atoms.

56. The composition according to claim 51, wherein X is chosen from:

- linear and branched alkyl radicals comprising 1 to 14 carbon atoms, and alkenyl radicals comprising 2 to 14 carbon atoms, optionally substituted with at least one entity chosen from oxygen and nitrogen atoms and groups comprising at least one hetero atom and optionally interrupted with at least one entity chosen from oxygen nitrogen, and fluorine atoms, and groups comprising at least one hetero atom
- dicarbonyl radicals;
- 5- and 6-membered heterocyclic radicals, chosen from imidazolo, pyrazolo, triazino and pyridino radicals, optionally substituted with at least one entity chosen from linear and branched alkyl radicals comprising 1 to 14 carbon atoms; and linear and branched aminoalkyl radicals comprising 1 to 10 carbon atoms, optionally substituted with a group comprising at least one entity chosen from hetero atoms and halogen atoms; and
- aromatic radicals comprising 6 carbon atoms and fused and non-fused diaromatic radicals, optionally separated with at least one alkyl radical comprising 1 to 4 carbon atoms, wherein the aromatic and diaromatic radicals are optionally substituted with at least one entity chosen from halogen atoms and alkyl radicals comprising 1 to 10 carbon atoms optionally interrupted with

at least one entity chosen from oxygen and nitrogen atoms, and groups comprising at least one hetero atom.

57. The composition according to claim 51, wherein the at least one fluorescent dye is present in an amount ranging from 0.01% to 20% by weight, relative to the total weight of the composition.

58. The composition according to claim 51, wherein the at least one fluorescent dye is present in an amount ranging from 0.05% to 10% by weight, relative to the total weight of the composition.

59. The composition according to claim 58, wherein the at least one fluorescent dye is present in an amount ranging from 0.1% to 5% by weight, relative to the total weight of the composition.

60. The composition according to claim 51, wherein the composition further comprises at least one additional fluorescent dye.

61. The composition according to claim 60, wherein the at least one additional fluorescent dye is present in an amount ranging from 0.05% to 10% by weight relative to the total weight of the composition.

62. The composition according to claim 61, wherein the at least one additional fluorescent dye is present in an amount ranging from 0.05% to 10% by weight, relative to the total weight of the composition.

63. The composition according to claim 51, wherein the composition further comprises at least one non-fluorescent direct dye.

64. The composition according to claim 63, wherein the at least one non-fluorescent direct dye is chosen from nitrobenzene dyes, azo dyes, azomethine dyes, methane dyes, anthraquinone dyes, naphthoquinone dyes, benzoquinone dyes,



phenothiazine dyes, indigoid dyes, xanthene dyes, phenanthridine dyes, phthalocyanin dyes, and triarylmethane-based dyes.

65. The composition according to claim 64, wherein the at least one direct dye is present in an amount ranging from 0.0005% to 12% by weight, relative to the total weight of the composition.

66. The composition according to claim 65, wherein the at least one direct dye is present in an amount ranging from 0.005% to 6% by weight, relative to the total weight of the composition.

67. The composition according to claim 51, wherein the composition further comprises at least one surfactant chosen from nonionic, anionic, cationic, amphoteric and zwitterionic surfactants.

68. The composition according to claim 67, wherein the at least one surfactant is present in an amount ranging from 0.01% to 40% by weight, relative to the total weight of the composition.

69. The composition according to claim 68, wherein the at least one surfactant is present in an amount ranging from 0.1% to 30% by weight, relative to the total weight of the composition.

70. The composition according to claim 51, wherein the cosmetically acceptable medium comprises water and optionally an organic solvent.

71. The composition according to claim 51, wherein the composition is in the form of a dyeing shampoo.

72. The composition according to claim 51, wherein the composition is in the form of a mascara for the eyelashes or a hair mascara.

73. The composition according to claim 51, wherein the composition further

comprises at least one oxidation base chosen from para-phenylenediamines, bis(phenyl)alkylenediamines, para-aminophenols, ortho-aminophenols, heterocyclic bases, and the acid and alkaline agent addition salts thereof.

74. The composition according to claim 73, wherein the at least one oxidation base is present in an amount ranging from 0.0005% to 12% by weight, relative to the total weight of the composition.

75. The composition according to claim 74, wherein the at least one oxidation base is present in an amount ranging from 0.005% to 6% by weight, relative to the total weight of the composition.

76. The composition according to claim 51, wherein the composition further comprises at least one coupler chosen from meta-phenylenediamines, meta-aminophenols, meta-diphenols, heterocyclic couplers, and the acid and alkaline agent addition salts thereof.

77. The composition according to claim 76, wherein the at least one coupler is present in an amount ranging from 0.0001% to 10% by weight, relative to the total weight of the composition.

78. The composition according to claim 77, wherein the at least one coupler is present in an amount ranging from 0.005% to 5% by weight, relative to the total weight of the composition.

79. The composition according to claim 51, wherein the composition further comprises at least one oxidizing agent.

80. The composition according to claim 79, wherein the at least one oxidizing agent is chosen from hydrogen peroxide, urea peroxide, alkali metal bromates, persalts, and enzymes.

81. The composition according to claim 80, wherein the persalts are chosen from perborates and persulphates.

82. The composition according to claim 80, wherein the enzymes are chosen from peroxidases and two-electron and four-electron oxidoreductases.

83. The composition according to claim 56, wherein the groups comprising at least one hetero atom are chosen from hydroxyl, alkoxy, amino, ammonium, amido, carbonyl, and carboxyl (-COOH- and -O-CO-) groups.

84. The composition according to claim 6, wherein the linear and branched alkyl radicals comprises 1 to 10 carbon atoms.

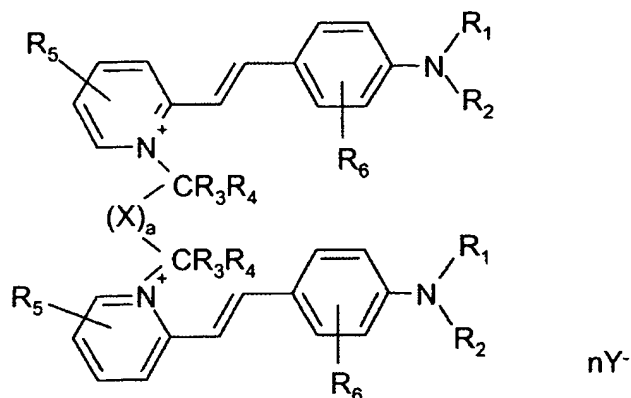
85. The composition according to claim 56, wherein the linear and branched alkyl radicals comprise 1 to 4 carbon atoms.

86. The composition according to claim 56, wherein the linear and branched aminoalkyl radicals comprise 1 to 4 carbon atoms.

87. The composition according to claim 56, wherein the groups comprising at least one entity chosen from hetero atoms is a hydroxyl radical.

88. The composition according to claim 56, wherein the fused and non-fused diaromatic radicals comprise 10 to 12 carbon atoms.

89. A composition comprising, in a cosmetically acceptable medium, at least one fluorescent dye having the following formula:



wherein:

$R_1$  and  $R_2$ , which may be identical or different, are chosen from:

- hydrogen atoms;
- linear and branched alkyl radicals comprising 1 to 10 carbon atoms, optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- aryl and arylalkyl radicals, wherein the aryl groups comprising 6 carbon atoms and the alkyl groups comprise 1 to 4 carbon atoms; the aryl groups optionally be substituted with at least one linear or branched alkyl radicals comprising 1 to 4 carbon atoms optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least entity chosen from one hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- $R_1$  and  $R_2$  is optionally linked so as to form a heterocycle with the nitrogen atom and optionally further comprises at least one hetero atom, wherein the heterocycle is optionally substituted with at least one entity chosen from linear

and branched alkyl radicals optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;

- $R_1$  or  $R_2$  is also optionally included in a heterocycle comprising the nitrogen atom and one of the carbon atoms of the phenyl group comprising the nitrogen atom;

$R_3$  and  $R_4$ , which may be identical or different, are chosen from hydrogen atoms and alkyl radicals comprising 1 to 4 carbon atoms;

$R_5$ , which may be identical or different, is chosen from hydrogen atoms, halogen atoms and linear and branched alkyl radicals comprising 1 to 4 carbon atoms, optionally interrupted with at least one hetero atom;

$R_6$ , which may be identical or different, is chosen from hydrogen atoms; halogen atoms; and linear and branched alkyl radicals comprising 1 to 4 carbon atoms, optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom and halogen atoms, and interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom;

X is chosen from:

- linear and branched alkyl radicals comprising 1 to 14 carbon atoms and alkenyl radicals comprising 2 to 14 carbon atoms, optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;

- 5- and 6-membered heterocyclic radicals optionally substituted with at least one entity chosen from linear and branched alkyl radicals comprising 1 to 14 carbon atoms, optionally substituted with at least one hetero atom; linear and branched aminoalkyl radicals comprising 1 to 4 carbon atoms, optionally substituted with at least one hetero atom; and halogen atoms;
- fused and non-fused aromatic and diaromatic radicals, optionally separated with an alkyl radical comprising 1 to 4 carbon atoms, wherein the aromatic and diaromatic radicals are optionally substituted with at least one entity chosen from halogen atoms, and alkyl radicals comprising 1 to 10 carbon atoms optionally substituted and/or interrupted with at least one hetero atom and/or group comprising at least one hetero atom;
- dicarbonyl radicals;
- the group X optionally comprising at least one cationic charge;

a is equal to 0 or 1;

Y<sup>-</sup>, which may be identical or different, is chosen from organic and mineral anions; and

n is an integer ranging from 2 to the number of cationic charges present in the fluorescent dye;

with the exception of the dye for which:

- X is chosen from unsubstituted linear alkyl radicals comprising 1 or 4 carbon atoms wherein a is equal to 1 or a is equal to 0; and R<sub>1</sub> and R<sub>2</sub> simultaneously are methyl radicals; R<sub>5</sub> and R<sub>6</sub> are hydrogen atoms; R<sub>3</sub> and R<sub>4</sub>, which may be identical, are hydrogen atoms;
- X is chosen from ethyl, linear and branched unsubstituted C<sub>3</sub> alkyl radicals, wherein a is equal to 1; R<sub>3</sub> and R<sub>4</sub>, which are identical, are hydrogen atoms; R<sub>5</sub> is a hydrogen atom; wherein R<sub>1</sub> and R<sub>2</sub>:

- are identical, and are methyl radicals and,  $R_6$  is chosen from a hydrogen atom and a methyl radical in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond; and
- are identical, are ethyl radicals,
- and  $R_6$  is chosen from hydrogen atoms and methoxy radicals in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond; or
- are different, and are chosen from ethyl radicals and ethyl radicals substituted with an entity chosen from dimethylamino, trimethylammonium and benzyldimethylammonium groups;

-X is chosen from phenyl radicals linked to the groups  $CR_3R_4$  via bonds in the 1,4 position relative to each other;  $R_3$  and  $R_4$ , which are identical, are hydrogen atoms; wherein a is equal to 1;  $R_5$  is a hydrogen atom; wherein  $R_1$  and  $R_2$ :

- are identical, and are methyl radicals,  $R_6$  is chosen from hydrogen atoms and methyl radicals in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond;
- and are identical, comprise ethyl radicals, and  $R_6$  is chosen from hydrogen atoms and methoxy radicals in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond; or
- are different, and are chosen from ethyl radicals and ethyl radicals substituted with an entity chosen from dimethylamino, trimethylammonium and benzyldimethylammonium groups.

90. The composition of claim 89, wherein  $R_1$  and  $R_2$ , which may be identical or

different, are chosen from:

- hydrogen atoms;
- alkyl radicals comprising 1 to 6 carbon atoms, optionally interrupted with an oxygen atom and optionally substituted with at least one entity chosen from hydroxyl, amino and ammonium radicals and chlorine and fluorine atoms;
- benzyl and phenyl radicals optionally substituted with at least one entity chosen from alkyl and alkoxy radicals comprising 1 to 4 carbon atoms;
- nitrogen atoms, heterocyclic radicals chosen from pyrrolo, pyrrolidino, imidazolino, imidazolo, imidazolium, pyrazolino, piperazino, morpholino, morpholo, pyrazolo and triazolo radicals, optionally substituted with at least one entity chosen from linear and branched alkyl radicals comprising 1 to 4 carbon atoms optionally interrupted with at least one entity chosen from nitrogen and oxygen atom, and groups comprising a nitrogen or oxygen atoms, and optionally substituted with at least one entity chosen from nitrogen and oxygen atoms and groups comprising nitrogen and/or oxygen atoms.

91. The composition according to claim 90, wherein the alkyl and alkoxy radical comprises 1 or 2 carbon atoms.

92. The composition according to claim 89, wherein  $R_1$  and  $R_2$ , which may be identical or different, are chosen from alkyl radicals comprising 1 to 4 carbon atoms.

93. The composition according to claim 92, wherein  $R_1$  and  $R_2$ , which may be identical or different, are chosen from methyl radicals and ethyl radicals.

94. The composition according to claim 89, wherein  $R_5$  and  $R_6$  are hydrogen atoms.

95. The composition according to claim 89, wherein X is chosen from:



- branched alkyl radicals comprising 4 to 14 carbon atoms; linear and branched alkyl radicals comprising 1 to 14 carbon atoms, substituted with at least one entity chosen from halogen atoms, hetero atoms, and groups bearing at least one hetero atom; linear and branched alkyl radicals comprising 1 to 14 carbon atoms interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom; linear and branched alkenyl radicals comprising 2 to 14 carbon atoms, optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms and groups bearing at least one hetero atom;
- dicarbonyl radicals;
- 5- and 6-membered heterocyclic radicals optionally substituted with at least one entity chosen from alkyl radicals comprising 1 to 14 carbon atoms, optionally substituted with at least one hetero atom; linear and branched aminoalkyl radicals, comprising 1 to 4 carbon atoms, optionally substituted with at least one hetero atom; and halogen atoms;
- C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and comprising a group comprising at least one hetero atom which is optionally directly linked to the aromatic radical, in position 1,3 relative to each other, wherein the C<sub>6</sub> aromatic radicals are optionally substituted with at least one entity chosen from halogen atom and C<sub>1</sub>-C<sub>4</sub> alkyl radicals; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via, linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals in position 1,2 relative to each other, which may be identical or different, and comprising a group comprising at least one hetero atom which is optionally directly linked to the aromatic radical; C<sub>6</sub> aromatic radicals linked to the

groups  $CR_3R_4$  via bonds in position 1,2 relative to each other, substituted with at least one group comprising at least one hetero atom;  $C_6$  aromatic radicals linked to the groups  $CR_3R_4$  via linear branched  $C_1$ - $C_4$  alkyl radicals, which may be identical or different, and containing a group comprising at least one hetero atom which may optionally be directly linked to the aromatic radical in position 1,4 relative to each other; and diphenyl radicals linked to the groups  $CR_3R_4$  via bonds in position 4,4' relative to each other, the two aromatic rings optionally being linked by means of a linear or branched  $C_1$ - $C_4$  alkyl radical; and

- the group X optionally bearing at least one cationic charge.

96. The composition according to claim 89, wherein X is chosen from:

- branched alkyl radicals comprising 4 to 13 carbon atoms; linear and branched alkyl radicals comprising 1 to 13 carbon atoms, substituted with at least one entity chosen from chlorine atoms, hydroxyl radicals, acetoxy radicals, amino radicals, and ammonium radicals; linear and branched alkyl radicals comprising 2 to 12 carbon atoms interrupted with at least one entity chosen from oxygen atoms, nitrogen atoms comprising at least one entity, which may be identical or different, chosen, independently of each other, from hydrogen atoms, and linear and branched  $C_1$ - $C_4$  alkyl radicals optionally comprising a hydroxyl group; and linear and branched alkene radicals comprising 2 to 12 carbon atoms, and comprising an unsaturated carbon-carbon bond;
- pyridine radicals linked to the groups  $CR_3R_4$  via bonds in positions 2 and 6 relative to each other;
- imidazole radicals optionally substituted with at least one  $C_1$ - $C_{14}$  alkyl radical;

- C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing a group comprising at least one hetero atom which may optionally be directly linked to the aromatic radical in position 1,3 relative to each other wherein the C<sub>6</sub> aromatic radicals are optionally substituted with at least one entity chosen from fluorine atoms and methyl; the bonds comprising C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing a group comprising an oxygen atom directly linked to the aromatic radical in position 1, 2 relative to each other; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via bonds in position 1,2 relative to each other, substituted with at least one—C(=O)O-; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and comprising at least one amide group directly linked to the aromatic radical in position 1,4 relative to each other; and diphenyl radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via bonds in position 4,4' relative to each other, the two aromatic rings being optionally linked by a linear or branched alkyl radical containing 1 to 4 carbon atoms;
- the group X optionally comprising at least one cationic charge.

97. The composition according to claim 89, wherein X is chosen from:

- branched alkyl radicals comprising 4 to 13 carbon atoms; linear and branched alkyl radicals comprising 1 to 13 carbon atoms, substituted with at least one entity chosen from chlorine atoms, hydroxyl radicals, acetoxy radicals, amino radicals, and ammonium radicals; linear and branched alkyl radicals comprising 2 to 12 carbon atoms interrupted with at least one entity chosen from oxygen atoms, and nitrogen

atoms comprising one or two radicals, which may be identical or different, chosen, independently of each other, from hydrogen atoms, linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals optionally comprising a hydroxyl group; and linear and branched alkene radicals comprising 2 to 12 carbon atoms, and comprising an unsaturated carbon-carbon bond;

- imidazole radicals optionally substituted with at least one C<sub>1</sub>-C<sub>14</sub> alkyl radical;
- C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing a group comprising at least one hetero atom which may optionally directly linked to the aromatic radical in position 1,3 relative to each other wherein the C<sub>6</sub> aromatic radicals are optionally substituted with at least one entity chosen from fluorine atoms and methyl; ; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via the linear or branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing an amide group directly linked to the aromatic radical in position 1, 4 relative to each other; and
- the group X optionally comprising at least one cationic charge.

98. The composition according to claim 89, wherein:

R<sub>1</sub> and R<sub>2</sub>, which may be identical or different, are chosen from methyl radicals and ethyl radicals,

R<sub>5</sub> and R<sub>6</sub> comprise hydrogen atoms,

X is chosen from:

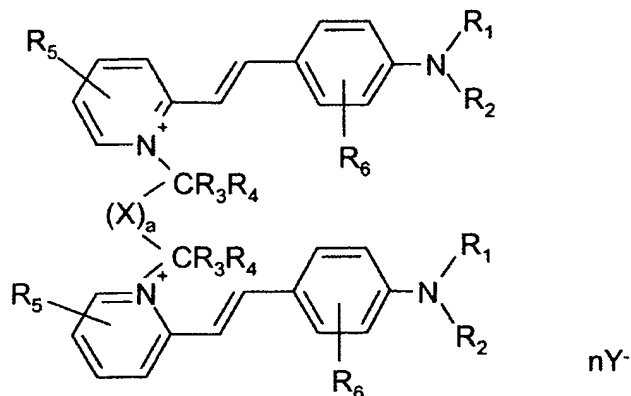
- branched alkyl radicals comprising 4 to 13 carbon atoms; linear or branched alkyl radicals comprising 1 to 13 carbon atoms, substituted with at least one entity chosen from chlorine atoms, hydroxyl radicals, acetoxy radicals, amino radicals, and

ammonium radicals; linear and branched alkyl radicals comprising 2 to 12 carbon atoms interrupted with at least one entity chosen from oxygen atoms, and nitrogen atoms comprising at least one radical, which may be identical or different, chosen, independently of each other, from hydrogen atoms, and linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals optionally comprising a hydroxyl group; linear and branched alkene radicals comprising 2 to 12 carbon atoms, and comprising an unsaturated carbon-carbon bond;

- imidazole radicals optionally substituted with at least one C<sub>1</sub>-C<sub>14</sub> alkyl radical;
- C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing a group comprising at least one hetero atom which is optionally directly linked to the aromatic radical in position 1,3 relative to each other wherein the C<sub>6</sub> aromatic radicals are optionally substituted with at least one entity chosen from fluorine atoms and methyl; ; C<sub>6</sub> aromatic radicals linked to the groups CR<sub>3</sub>R<sub>4</sub> via linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl radicals, which may be identical or different, and containing an amide group directly linked to the aromatic radical in position 1, 4, relative to each other; and
- the group X optionally comprising at least one cationic charge.

99. A multi-kit comprising a first compartment comprising at least one composition, the composition comprises, in a cosmetically acceptable medium,

at least one fluorescent dye having the following formula:



wherein:

$\text{R}_1$  and  $\text{R}_2$ , which may be identical or different, are chosen from:

- hydrogen atoms;
- linear and branched alkyl radicals comprising 1 to 10 carbon atoms, optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- aryl and arylalkyl radicals, wherein the aryl groups comprising 6 carbon atoms and the alkyl groups comprise 1 to 4 carbon atoms; the aryl groups optionally be substituted with at least one linear or branched alkyl radicals comprising 1 to 4 carbon atoms optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least entity chosen from one hetero atoms, groups comprising at least one hetero atom, and halogen atoms;
- $\text{R}_1$  and  $\text{R}_2$  is optionally linked so as to form a heterocycle with the nitrogen atom and optionally further comprises at least one hetero atom, wherein the heterocycle is optionally substituted with at least one entity chosen from linear

and branched alkyl radicals optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;

- $R_1$  or  $R_2$  is also optionally included in a heterocycle comprising the nitrogen atom and one of the carbon atoms of the phenyl group comprising the nitrogen atom;

$R_3$  and  $R_4$ , which may be identical or different, are chosen from hydrogen atoms and alkyl radicals comprising 1 to 4 carbon atoms;

$R_5$ , which may be identical or different, is chosen from hydrogen atoms, halogen atoms and linear and branched alkyl radicals comprising 1 to 4 carbon atoms, optionally interrupted with at least one hetero atom;

$R_6$ , which may be identical or different, is chosen from hydrogen atoms; halogen atoms; and linear and branched alkyl radicals comprising 1 to 4 carbon atoms, optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom and halogen atoms, and interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom;

X is chosen from:

- linear and branched alkyl radicals comprising 1 to 14 carbon atoms and alkenyl radicals comprising 2 to 14 carbon atoms, optionally interrupted with at least one entity chosen from hetero atoms and groups comprising at least one hetero atom and optionally substituted with at least one entity chosen from hetero atoms, groups comprising at least one hetero atom, and halogen atoms;

- 5- and 6-membered heterocyclic radicals optionally substituted with at least one entity chosen from linear and branched alkyl radicals comprising 1 to 14 carbon atoms, optionally substituted with at least one hetero atom; linear and branched aminoalkyl radicals comprising 1 to 4 carbon atoms, optionally substituted with at least one hetero atom; and halogen atoms;
- fused and non-fused aromatic and diaromatic radicals, optionally separated with an alkyl radical comprising 1 to 4 carbon atoms, wherein the aromatic and diaromatic radicals are optionally substituted with at least one entity chosen from halogen atoms, and alkyl radicals comprising 1 to 10 carbon atoms optionally substituted and/or interrupted with at least one hetero atom and/or group comprising at least one hetero atom;
- dicarbonyl radicals;
- the group X optionally comprising at least one cationic charge;

a is equal to 0 or 1;

Y<sup>-</sup>, which may be identical or different, is chosen from organic and mineral anions; and

n is an integer ranging from 2 to the number of cationic charges present in the fluorescent dye;

with the exception of the dye for which:

- X is chosen from unsubstituted linear alkyl radicals comprising 1 or 4 carbon atoms wherein a is equal to 1 or a is equal to 0; and R<sub>1</sub> and R<sub>2</sub> simultaneously are methyl radicals; R<sub>5</sub> and R<sub>6</sub> are hydrogen atoms; R<sub>3</sub> and R<sub>4</sub>, which may be identical, are hydrogen atoms;•

X is chosen from ethyl, linear and branched unsubstituted C<sub>3</sub> alkyl radicals, wherein a is equal to 1; R<sub>3</sub> and R<sub>4</sub>, which are identical, are hydrogen atoms; R<sub>5</sub> is a hydrogen atom; wherein R<sub>1</sub> and R<sub>2</sub>:



- are identical, and are methyl radicals and,  $R_6$  is chosen from a hydrogen atom and a methyl radical in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond; and
- are identical, are ethyl radicals,
- and  $R_6$  is chosen from hydrogen atoms and methoxy radicals in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond; or
- are different, and are chosen from ethyl radicals and ethyl radicals substituted with an entity chosen from dimethylamino, trimethylammonium and benzyldimethylammonium groups;

-X is chosen from phenyl radicals linked to the groups  $CR_3R_4$  via bonds in the 1,4 position relative to each other;  $R_3$  and  $R_4$ , which are identical, are hydrogen atoms; wherein a is equal to 1;  $R_5$  is a hydrogen atom; wherein  $R_1$  and  $R_2$ :

- are identical, and are methyl radicals,  $R_6$  is chosen from hydrogen atoms and methyl radicals in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond;
- and are identical, comprise ethyl radicals, and  $R_6$  is chosen from hydrogen atoms and methoxy radicals in an ortho position relative to the carbon atom of the benzene ring bearing the carbon-carbon unsaturated bond; or
- are different, and are chosen from ethyl radicals and ethyl radicals

substituted with an entity chosen from dimethylamino, trimethylammonium and benzyldimethylammonium groups; and optionally at least one entity chosen from direct dyes, oxidation bases, and couplers; and

a second compartment comprising at least one oxidizing agent.